Amendments to the Specification:

Please delete the sub-heading before paragraph [0001] and insert the following new sub-headings and paragraph:

-- PRIORITY CLAIM

This is a U.S. national stage of application No. PCT/IB2003/003780, filed on 22 August 2003. Priority under 35 U.S.C. §119(a) and 35 U.S.C. §365(b) is claimed from Switzerland Application No. 2002 1671/02, filed 7 October 2002.

BACKGROUND OF THE INVENTION

1. Field of the Invention --

Please replace paragraph [0001] with the following amended paragraph:

[0001] The invention is directed to a regulating [~~device according to the preamble of claim 1.~~] apparatus for a hydraulic system having at least one valve controlling a consumer, the apparatus including a job computer, a bus connected to the job computer and to each valve, and at least one sensor producing a signal for controlling or regulating the consumer.

Please add before paragraph [0002] the following new sub-heading:

-- 2. Description of the Related Art --

Please replace paragraph [0004] with the following amended paragraph:

[0004] A regulating device of the type mentioned [~~in the preamble of claim 1~~] above is known from DE-A1-199 53 189. In this case, it is proposed that the master control unit be connected to the regulating valve via a first bus system, while sensors for the state variables of the regulating valve are connected to a second bus system. Accordingly, the data traffic is distributed to two separate bus systems so that the data traffic is reduced on each of the bus systems and security problems are avoided in time-critical control tasks.

Please replace paragraph [0006] with the following amended paragraph:

[0006] [~~WO-A2-01/18763~~] U.S. Patent No. 6,463,950 discloses a device for transmitting control and/or sensor signals. An electronic control device and/or data receiving device is arranged between a pneumatic device containing two valves controlled by a microcontroller. The data exchange between the pneumatic device and the electronic control device and/or data receiving device is carried out over a pneumatic line. Accordingly, it is necessary to provide a bi-directional converter in both the pneumatic device and the electronic control device and/or data receiving device. Therefore, data signals and control signals are converted twice from an electric signal to a pressure, or vice versa. A solution of this kind is costly and possibly also not particularly precise because each signal conversion can mean that the signal has been corrupted. For conveying data or commands quickly, it is probably also not helpful that the pneumatic transmission medium is compressible. As a result of the two-fold signal conversion and the

compressibility of the transmission medium, tolerance problems and, therefore, security problems are not unlikely.

Please add before paragraph [0008] the following new sub-heading:

-- SUMMARY OF THE INVENTION --

Please replace paragraph [0009] with the following amended paragraph:

[0009] This object is met, according to the invention, [~~through the features of claim 1. Advantageous further developments are indicated in the dependent claims.~~] by an autonomous controlling and regulating element arranged between the bus and each valve, each element comprising a bus interface connected to the bus, a microcontroller connected to the bus interface and to the valve, and at least one analog-to-digital converter connected to the microcontroller and which can be connected to at least one analog sensor.

Please delete paragraph [0010] in entirety.

Please add before paragraph [0011] the following new sub-heading:

-- BRIEF DESCRIPTION OF THE DRAWINGS --

Please add before paragraph [0016] the following new sub-heading:

-- DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS --

Please delete the heading at page 10 and insert the following new heading and sub-heading:

-- CLAIMS

What is claimed is: --